

ABSTRACT OF THE DISCLOSURE

A drive signal generator generates a drive signal including a drive pulse supplied to a pressure generating element. The drive pulse including a first expanding element, which drives the pressure generating element so as to expand a pressure chamber, so that a meniscus of liquid in a nozzle orifice is pulled toward the pressure chamber, a first contracting element, which drives the pressure generating element so as to contract the pressure chamber expanded by the first expanding element, so that a center portion of the meniscus is swelled in an ejecting direction of a liquid drop, and a second expanding element, which drives the pressure generating element so as to expand the pressure chamber contracted by the first contracting element, so that a marginal portion of the swelled center portion of the meniscus is pulled toward the pressure chamber. The first expanding element is supplied for a time period which is not greater than a half a natural vibration period of the pressure chamber. A potential difference of the first contracting element being not greater than 60% of a potential difference between a minimum potential and a maximum potential of the drive signal.

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